

What Is Claimed Is:

1. Substantially pure endoglucanase having an amino acid sequence selected from the group consisting of SEQ ID NO:2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 36, 38, 40, 42, 44, 46, and 48.
2. An isolated polynucleotide sequence encoding an endoglucanase of claim 1.
3. An isolated polynucleotide selected from the group consisting of:
 - a) SEQ ID NO:1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, and 47;
 - b) SEQ ID NO:1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, and 47, wherein T can also be U;
 - c) nucleic acid sequences complementary to a) and b); and
 - d) fragments of a), b), or c) that are at least 15 bases in length and that will selectively hybridize to DNA which encodes the amino acid sequences of SEQ ID NO:2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 36, 38, 40, 42, 44, 46, and 48.
4. The polynucleotide of claim 2, wherein the polynucleotide is isolated from a prokaryote.
5. An expression vector including the polynucleotide of claim 2.
6. The vector of claim 5, wherein the vector is a plasmid.
7. The vector of claim 5, wherein the vector is a virus-derived.
8. A host cell transformed with the vector of claim 5.
9. The host cell of claim 8, wherein the cell is prokaryotic.

10. Antibodies that bind to the polypeptide of claim 1.
11. The antibodies of claim 10, wherein the antibodies are polyclonal.
12. The antibodies of claim 10, wherein the antibodies are monoclonal.
13. An enzyme comprising a member selected from the group consisting of:
 - a) an enzyme comprising an amino acid sequence which is at least 70% identical to the amino acid sequence set forth in SEQ ID NO:2; and
 - b) an enzyme which comprises at least 30 amino acid residues to the enzyme of a).
14. A method for producing an enzyme comprising growing a host cell of claim 8 under conditions which allow the expression of the nucleic acid and isolating the enzyme encoded by the nucleic acid.
15. A method for degrading carboxymethylcellulose comprising contacting carboxymethylcellulose with a degrading effective amount of the enzyme of claim 1.
16. A method for hydrolyzing the beta 1,4 glycosidic bond in cellulose comprising contacting an effective amount of the enzyme of claim 1 with cellulose to hydrolyze the glycosidic bond.

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